STIC Search Report
EIC 2100

STIC Database Tracking Number: 114164

TO: Aaron Strange **Location: 3C16** **Art Unit : 2153** **Friday, February 13, 2004** **Case Serial Number: 09/670157**	**From: David Holloway** **Location: EIC 2100** **PK2-4B30** **Phone: 308-7794** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Strange,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

Definitions of **Jitter** on the Web:

The slight movement of a transmission signal in time or phase that can introduce errors and loss of synchronization. More jitter will be encountered with longer cables, cables with higher attenuation, and signals at higher data rates. Also, called phase jitter, timing distortion, or intersymbol interference.
www.femf.org/education/Summit2000syll/ottglossary.htm

Analog communication line distortion caused by variations of a signal from its reference timing position.
www.marconi.com/html/glossary/glossaryj.htm

Variation in timing, or time of arrival, of received signals; an unwanted lack of perfection which can lead to bit areas.
www.interoute.com/glossary/index.stm

Jumping or instability in the television picture, often caused by synchronization or tracking errors.
www.bavc.org/glossary.htm

Interference on an analog line caused by a variation of a signal from its reference timing slots. Jitter can cause problems in the receipt of data.
www.aware.com/products/dsl/glossary.htm

Variation in the time position of a read data event from the expected position.
www.mscience.com/gloss.html

A flickering signal caused by packet transmission delays
www.puredata.com/manual/backboneswiches/appendix/glossary.html

Jitter is a kind of distortion of digital signals that takes the form of phase shifts over a transmission medium.
www.networkbuyersguide.com/search/105487.htm

An unwanted signal variation.
www.itvdictionary.com/j.html

The flux reversal spacing variation on a magnetic stripe, whether real or apparent; if the reversal is improperly placed on the stripe, it is called encoded jitter; jitter resulting from speed changes during the read is called acceleration jitter; jitter resulting from read circuit changes with amplitude or frequency is called phase jitter
www.aimglobal.org/technologies/card/msglossary.htm

—Also called phase jitter, timing distortion, or inter-symbol interference. The slight movement of a transmission signal in time or phase that can introduce data errors and loss of synchronization.
www.entivity.co.uk/devices/ethernet_glossary.htm

Abrupt and unwanted variations of one or more signal characteristics, such as the interval between successive pulses, the amplitude of successive cycles, or the frequency or phase of successive cycles. (188) Note 1: Jitter must be specified in qualitative terms (e.g., amplitude, phase, pulse

width or pulse position) and in quantitative terms (e.g., average, RMS, or peak-to-peak). Note 2: The low-frequency cutoff for jitter is usually specified at 1 Hz. Contrast with drift, wander.
www.bandwidthmarket.com/resources/glossary/J1.html

A measure of the short term frequency stability of the oscillator. It applies only to rectangular wave forms. It is measured as the uncertainty in the location of one edge of the signal with respect to other edges. It is usually specified in units of time (nano-seconds or pico-seconds), but may also be specified in degrees. This measurement has particular application to the digital communications industry.
www.hy-q.com.au/oscillators/osc-glossary.htm

Temporal variation in a signal from an ideal reference clock. There are many kinds of jitter, including sample jitter, channel jitter, and interface jitter.
www.dvdmadeeasy.com/glossary/j.html

Small and rapid variations in the timing of a waveform due to noise, changes in component characteristics, supply voltages, imperfect synchronizing circuits, etc. See also DDJ, DCD, and RJ.
www.fiber-optics.info/glossary-ijk.htm

The slight movement of a transmission signal in time or phase that can introduce errors & loss of synchronization in high speed synchronous communications.
www.connectworld.net/iec/Browse02/GLSJ.html

Jitter is the variance of latency (i.e. delay) in a connection. The problem is that audio devices or connection-oriented systems (e.g. ISDN or PSTN) need a continuous stream of data. In order to compensate for this, VoIP terminals and gateways implement a jitter buffer that collect the packets before relaying them onto their audio devices or connection-oriented lines (e.g. ISDN), respectively. An increase in the jitter buffer size decreases the likelihood of data being missed but also has the drawback that it increases latency of a connection.
www.nikotel.net/glossary

In telecommunications, analog communication line distortion caused by the variation of a signal from its reference timing positions. Jitter can cause data loss, particularly at high speeds.
www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cdm/cdm34/cdmobj/06objcgl.htm

In ATM, the Cell Delay Variation (CDV). In a more general context, this is the variation of a frequence supposed to be stable.
www2.themanualpage.org/glossary/glo_j.php3

The deviation of a transmission signal in time or phase. It can introduce errors and loss of synchronization in high-speed synchronous communications.
www.oly-tech.com/vtcgloassary.html

Jitter is a short term instability of the amplitude and/or phase of a signal. It is commonly called Phase Jitter.
education.icn.siemens.com/doc/jobaids/glossary/test_J.htm

Deviation from the original being copied.
www.plextor.com/english/news/glossary.html

The timing uncertainty of the signal crossing zero voltage. 2
www.relcominc.com/carrier-band/handbook/glossary.htm

Small vibrations or fluctuations in a displayed image caused by irregularities in the display signal.
www.dsea.com/glossary/html/glossary1.html

Short-term (intra packet) instability of an electrical signal caused by electrical or mechanical

changes. Commonly called phase jitter.
www.watersnet.com/watersnet/tech/glossary.html

small rapid variations in a waveform resulting from fluctuations in the voltage supply or mechanical vibrations or other sources
www.cogsci.princeton.edu/cgi-bin/webwn

define:Jitter Google Search

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Set     Items   Description
S1        362   AU=(SUNDARAM R? OR SUNDARAM, R?)
S2          2   AU=(KANIYAR S? OR KANIYAR, S?)
S3          0   S1 AND S2
S4          0   (S1 OR S2) AND JITTER?
File   2:INSPEC 1969-2004/Feb W1
         (c) 2004 Institution of Electrical Engineers
File   6:NTIS 1964-2004/Feb W2
         (c) 2004 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2004/Feb W1
         (c) 2004 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2004/Feb W2
         (c) 2004 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2004/Jan
         (c) 2004 ProQuest Info&Learning
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         (c) 2004 BLDSC all rts. reserv.
File 636:Gale Group Newsletter DB(TM) 1987-2004/Feb 13
         (c) 2004 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2004/Feb 13
         (c) 2004 The Gale Group
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Set     Items   Description
S1         81   AU=(SUNDARAM R? OR SUNDARAM, R?)
S2          7   AU=(KANIYAR S? OR KANIYAR, S?)
S3          0   S1 AND S2
S4         10   (S1 OR S2) AND IC=G06F-015?
S5         10   IDPAT (sorted in duplicate/non-duplicate order)
S6          9   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Oct 1976-2003/Oct(Updated 040202)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200410
         (c) 2004  Thomson Derwent
File 348:EUROPEAN PATENTS 1978-2004/Feb W01
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040205,UT=20040129
         (c) 2004 WIPO/Univentio
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6/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015933708 **Image available**
WPI Acc No: 2004-091549/200409
XRPX Acc No: N04-073314
Web site cloaking method, involves shielding content providers origin server from Internet protocol traffic routed over public Internet, and delivering content published at server from content delivery network region
Patent Assignee: AKAMAI TECHNOLOGIES INC (AKAM-N)
Inventor: AFERGAN M M; ELLIS A B; RAHUL H S; **SUNDARAM R**
Number of Countries: 104 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200406113	A1	20040115	WO 2003US21326	A	20030709	200409	B

Priority Applications (No Type Date): US 2002191309 A 20020709
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200406113	A1	E	21	G06F-015/16	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200406113 A1
NOVELTY - The method involves shielding a content providers origin server from Internet protocol (IP) traffic routed over a public Internet. The server is shielded by restricting access to the server except through a private IP address space and restricting IP spoofing for addresses within the space. The content published at the server on behalf of participating content providers is delivered from a content delivery network region.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a web site comprising an origin server, a firewall and router connectable to a publicly-routable Internet.
USE - Used for cloaking a Web site from public Internet threats.
ADVANTAGE - The method cloaks the web site origin server from the public Internet threats while still ensuring quick delivery of the content available from the site without fail, regardless of a user location.
DESCRIPTION OF DRAWING(S) - The drawing shows a content delivery network tiered distribution scheme.
Edge servers (302a-302n)
End users (306a-306n)
pp; 21 DwgNo 3/5
Title Terms: WEB; SITE; METHOD; SHIELD; CONTENT; ORIGIN; SERVE; PROTOCOL; TRAFFIC; ROUTE; PUBLIC; DELIVER; CONTENT; SERVE; CONTENT; DELIVER; NETWORK; REGION
Derwent Class: T01
International Patent Class (Main): **G06F-015/16**
File Segment: EPI

6/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015813501 **Image available**
WPI Acc No: 2003-875705/200381
XRPX Acc No: N03-699234
Computing tasks offloading method in networked application, involves

transmitting network stack state object and buffers from software and switch layers to peripheral device, when offloading is accepted by peripheral device

Patent Assignee: MICROSOFT CORP (MICT)
Inventor: GHADEGESIN A; **KANIYAR S** ; PINKERTON J; SRINIVAS N K; GBADEGESIN A; SRINIVAS N
Number of Countries: 033 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030204634	A1	20031030	US 2002135489	A	20020430	200381	B
EP 1359724	A1	20031105	EP 20037902	A	20030407	200381	
JP 2003333076	A	20031121	JP 2003124294	A	20030428	200402	

Priority Applications (No Type Date): US 2002135489 A 20020430
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030204634	A1		22	G06F-015/16	
EP 1359724	A1	E		H04L-029/06	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
JP 2003333076	A		24	H04L-012/56	

Abstract (Basic): US 20030204634 A1

NOVELTY - A request with resource requirements to offload network stack state object from a switch layer to a peripheral device, is transmitted through software layers to the peripheral device. An offload handle is received by one software layer in response, and the network stack state object is sent to peripheral device from the software layer, while buffers are transferred to the peripheral device from the switch layer during offloading.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for computer readable medium storing computing task offloading program.

USE - In computer system for offloading computing tasks performed by host computer to peripheral device e.g. network interface cards (NICs) in networked application and distributed computing application.

ADVANTAGE - The offloading increases efficiency, speed and throughput of the computer system. Maintains tight synchronization between host processing unit and peripheral devices.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the functional layers of network driver interface specification and bypass path.

NIC (170)
network stack (202)
chimney (308)
pp; 22 DwgNo 3/9

Title Terms: COMPUTATION; TASK; METHOD; APPLY; TRANSMIT; NETWORK; STACK; STATE; OBJECT; BUFFER; SOFTWARE; SWITCH; LAYER; PERIPHERAL; DEVICE; ACCEPT; PERIPHERAL; DEVICE
Derwent Class: T01
International Patent Class (Main): **G06F-015/16** ; H04L-012/56; H04L-029/06
International Patent Class (Additional): G06F-013/00
File Segment: EPI

6/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

015813500 **Image available**
WPI Acc No: 2003-875704/200381
XRPX Acc No: N03-699233

Off-loaded network stack state object uploading method in computer system, involves commanding intermediate layer to control received delegated-state variable and sending network data to peripheral device hardware

Patent Assignee: MICROSOFT CORP (MICT)
Inventor: GBADEGESIN A; **KANIYAR S** ; PINKERTON J; SRINIVAS N K; SRINIVAS N
Number of Countries: 034 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030204631	A1	20031030	US 2002135630	A	20020430	200381	B
CA 2425706	A1	20031030	CA 2425706	A	20030414	200381	
EP 1361512	A2	20031112	EP 20039321	A	20030424	200382	
JP 2004030612	A	20040129	JP 2003125928	A	20030430	200410	

Priority Applications (No Type Date): US 2002135630 A 20020430

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030204631	A1		24	G06F-015/16	
CA 2425706	A1	E		H04L-029/10	
EP 1361512	A2	E		G06F-009/46	
				Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR	
JP 2004030612	A		37	G06F-013/00	

Abstract (Basic): US 20030204631 A1

NOVELTY - An intermediate software layer in a network stack (202), is commanded to take-over the control of a delegated-state variable after receiving the delegated-state variable. The network data received from an application (200) is sent through a network driver interface specification (NDIS) mini driver (310) to a peripheral device hardware (314).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) method of synchronizing off-loaded network state object between host and peripheral device;

(2) computer readable medium storing off-loaded network stack state object uploading program;

(3) computer readable medium storing off-loaded network stack state object synchronization program;

(4) method to conserve resources in peripheral device;

(5) computer readable medium storing resource conservation program;

(6) method to obtain statistics for network stack; and

(7) computer readable medium storing network stack statistics generation program.

USE - For use in computer systems for uploading computing tasks performed by host processor that has been off-loaded to specific hardware components such as network interface cards (NICs).

ADVANTAGE - Increases the efficiency, speed and throughput of the computer systems. Enables maintaining light synchronization between host processors and peripheral devices.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the functional layers of the network driver interface specification (NDIS) path and the bypass path.

application (200)

network stack (202)

NDIS mini driver (310)

peripheral device hardware (314)

pp; 24 DwgNo 3/9

Title Terms: LOAD; NETWORK; STACK; STATE; OBJECT; METHOD; COMPUTER; SYSTEM; COMMAND; INTERMEDIATE; LAYER; CONTROL; RECEIVE; STATE; VARIABLE; SEND; NETWORK; DATA; PERIPHERAL; DEVICE; HARDWARE

Derwent Class: T01

International Patent Class (Main): G06F-009/46; G06F-013/00; **G06F-015/16** ; H04L-029/10

International Patent Class (Additional): G06F-013/42; **G06F-015/17** ; H04L-012/16

File Segment: EPI

6/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

015661531 **Image available**

WPI Acc No: 2003-723718/[redacted]369
XRPX Acc No: N03-578692
Symmetrical multiprocessing implementation method for multiprocessor system applies mapping algorithm to received Internet data packet to obtain map value for application to processor selection policy
Patent Assignee: MICROSOFT CORP (MICT)
Inventor: DABAGH A; **KANIYAR S N** ; MURCHING A; SETHI B S; SRINIVAS N
Number of Countries: 032 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1349065	A2	20031001	EP 20036144	A	20030318	200369	B
US 20030187914	A1	20031002	US 2002112812	A	20020329	200372	

Priority Applications (No Type Date): US 2002112812 A 20020329
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1349065	A2	E	25	G06F-009/46	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
US 20030187914 A1				G06F-015/16	

Abstract (Basic): EP 1349065 A2
NOVELTY - A mapping algorithm is applied to a data packet received by the multiprocessor system (100a,b) from a client (110a-f), to yield a map value. The map value is then applied to a processor selection policy which uses a load-balancing algorithm to select a processor to perform receive-side processing of the data packet. The data packet is directed into a queue for the selected processor.
DETAILED DESCRIPTION - The mapping algorithm is a hashing function and the map value is a hash value.
INDEPENDENT CLAIMS are also included for ;
(1) Stored software.
(2) A framework for scheduling receive-side processing of data packets in a multiprocessor system.
USE - For systematically partitioning Input/Output (I/O) tasks for network connections across processors in a multiprocessor system (and vice-versa).
ADVANTAGE - The connection state lives on a single processor for the lifetime of a network connection, ensuring that I/O tasks associated with a particular connection are processed by the same processor.
DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of a networked computer system.
multiprocessor system (100a,b,)
client (110a-f)
Internet (115)
pp; 25 DwgNo 1/10
Title Terms: SYMMETRICAL; MULTIPROCESSOR; IMPLEMENT; METHOD; MULTIPROCESSOR ; SYSTEM; APPLY; MAP; ALGORITHM; RECEIVE; DATA; PACKET; OBTAIN; MAP; VALUE; APPLY; PROCESSOR; SELECT
Derwent Class: T01
International Patent Class (Main): G06F-009/46; **G06F-015/16**
File Segment: EPI

6/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015494852 **Image available**
WPI Acc No: 2003-556999/200352
XRPX Acc No: N03-442633
Communication timer management framework for transmission control protocol used in e-mail service, receives new schedule and adds reference to status structure, when status structure is not currently referenced on timer
Patent Assignee: MICROSOFT CORP (MICT)
Inventor: COX S D; GBADEGESIN A; **KANIYAR S N** ; SETHI B S; SRINIVAS N

Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
US 20030084175 A1 20030501 US 2001999132 A 20011101 200352 B

Priority Applications (No Type Date): US 2001999132 A 20011101
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20030084175 A1 14 G06F-015/16

Abstract (Basic): US 20030084175 A1

NOVELTY - The framework has several connection status structures, each of which supports timers associated with a connection in an active connection timer structure(206). A schedule action handler (208) that receives new action scheduled on the connection adds a reference to each connection status structure, only when the status structure is not currently referenced on the timer structure.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) network communications protocol action scheduling timers handling method;

(2) computer readable recorded medium storing network communications protocol action scheduling timers handling program; and

(3) network communications protocol action scheduling timers handling program.

USE - For handling timers associated with network communications protocols e.g. transmission control protocols (TCP) used in web-based e-mail and instant messaging service.

ADVANTAGE - Avoids scanning of large portion of timer transmission structures. Reduces CPU loading associated with timer transmission structures by checking only the timer transmission structures with scheduled action, thereby improving server performance.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic view of the communication timer management framework.

server (200)
timer management framework (204)
active connection timer structure (206)
handler (208)
pp; 14 DwgNo 2/6

Title Terms: COMMUNICATE; TIME; MANAGEMENT; FRAMEWORK; TRANSMISSION; CONTROL; PROTOCOL; MAIL; SERVICE; RECEIVE; NEW; SCHEDULE; ADD; REFERENCE; STATUS; STRUCTURE; STATUS; STRUCTURE; CURRENT; REFERENCE; TIME
Derwent Class: T01; T05; W01
International Patent Class (Main): **G06F-015/16**
International Patent Class (Additional): G06F-013/10
File Segment: EPI

6/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014956754 **Image available**
WPI Acc No: 2003-017268/200301
XRPX Acc No: N03-013162

File download time prediction method for directing traffic to mirrored web site, involves computing exponentially time-weighted average of network performance data, that is generated from test probes provided in network

Patent Assignee: BERGER A W (BERG-I); HANONO-WACHMAN S (HANO-I); LEIGHTON F T (LEIG-I); LEVINE M (LEVI-I); PARKER A (PARK-I); SOVIANI A (SOVI-I); SUNDARAM R (SUND-I)
Inventor: BERGER A W; HANONO-WACHMAN S; LEIGHTON F T; LEVINE M; PARKER A; SOVIANI A; **SUNDARAM R**
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
US 20020124080 A1 20020905 US 2000208013 A 20000526 200301 B

Priority Applications (No Type Date): US 2000208013 P 20000526; US 2001867141 A 20010530
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20020124080 A1 15 G06F-015/173 Provisional application US 2000208013

Abstract (Basic): US 20020124080 A1
NOVELTY - A test probe from a server is periodically initiated to a given point in a network such as Internet. Network performance data generated from the test probes is collected. An exponentially time-weighted average of the network performance data is computed, based on which a value indicative of the file download time is generated.
USE - For predicting file download time to direct traffic to mirrored web site, for global load balancing and also applicable to direct caches to storage servers, to direct streaming servers to signal acquisition points, to direct logging processes to log archiving servers, to direct mail processes to mail servers, etc.
ADVANTAGE - Requires very little state for keeping track of the time series and is able to compute a new estimate without having any restriction in the file sizes and download types, by using exponentially time-weighted average of network performance data.
DESCRIPTION OF DRAWING(S) - The figure shows a representative trace route generated during the core point discovery process.
pp; 15 DwgNo 7/7
Title Terms: FILE; TIME; PREDICT; METHOD; DIRECT; TRAFFIC; MIRROR; WEB; SITE; COMPUTATION; EXPONENTIAL; TIME; WEIGHT; AVERAGE; NETWORK; PERFORMANCE; DATA; GENERATE; TEST; PROBE; NETWORK
Derwent Class: T01
International Patent Class (Main): **G06F-015/173**
File Segment: EPI

6/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014796715 **Image available**
WPI Acc No: 2002-617421/200266
Related WPI Acc No: 2002-268434
XRPX Acc No: N02-488620
Network map generation method for directing traffic to mirrored website, involves assigning Internet protocol address of common routing point as core point in address space of local server
Patent Assignee: LEIGHTON F T (LEIG-I); LEVINE M (LEVI-I); SOVIANI A (SOVI-I); SUNDARAM R (SUND-I)
Inventor: LEIGHTON F T; LEVINE M; SOVIANI A; **SUNDARAM R**
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
US 20020078237 A1 20020620 US 2000207518 A 20000526 200266 B
US 2000208014 A 20000526
US 2001866884 A 20010529

Priority Applications (No Type Date): US 2001866884 A 20010529; US 2000207518 P 20000526; US 2000208014 P 20000526
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20020078237 A1 14 G06F-015/173 Provisional application US 2000207518
Provisional application US 2000208014

Abstract (Basic): US 20020078237 A1
NOVELTY - A route from each of the two data centers to a specified local server is executed and an intersection of the routes at a common routing point is located. An Internet protocol (IP) address of the

common routing point assigned as a core point in the address space of the local server.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) Content request routing map generation method; and

(2) Mirror site determination map generation method.

USE - For creating network maps used in directing traffic to mirrored websites, directing caches to storage servers, directing streaming servers to signal acquisition points, directing logging process to log archiving servers, directing mail processes to mail server, etc.

ADVANTAGE - Reduces size of the network map and enables intelligent traffic redirection load balancing for local server by creating a generalized core point.

DESCRIPTION OF DRAWING(S) - The figure shows the global traffic management system.

pp; 14 DwgNo 2/8

Title Terms: NETWORK; MAP; GENERATE; METHOD; DIRECT; TRAFFIC; MIRROR; ASSIGN; PROTOCOL; ADDRESS; COMMON; ROUTE; POINT; CORE; POINT; ADDRESS; SPACE; LOCAL; SERVE

Derwent Class: T01; W01

International Patent Class (Main): **G06F-015/173**

File Segment: EPI

6/5/8 (Item 8 from file: 350)

014447731 **Image available**

WPI Acc No: 2002-268434/200231

Related WPI Acc No: 2002-617421

XRPX Acc No: N02-208897

Global load balancing across mirrored data centers, identifying set of proxy points, where proxy point represents given point in Internet at which trace originating from mirror sites directed toward given name server intersect

Patent Assignee: AKAMAI TECHNOLOGIES INC (AKAM-N); DHANIDINA R S (DHAN-I); KLEINBERG R (KLEI-I); LEIGHTON F T (LEIG-I); LEVINE M (LEVI-I); LEWIN D M (LEWI-I); MAGGS B (MAGG-I); PARIKH J G (PARI-I); RAHUL H S (RAHU-I); SOVIANI A M (SOVI-I); SUNDARAM R (SUND-I); THIRUMALAI S (THIR-I); YERUSHALMI Y O (YERU-I)

Inventor: DHANIDINA R S; KLEINBERG R; KORUPOLU M R; LEIGHTON F T; LEVINE M; LEWIN D M; MAGGS B; PARIKH J G; RAHUL H S; SOVIANI A; **SUNDARAM R** ; THIRUMALAI S; YERUSHALMI Y O; SOVIANI A M

Number of Countries: 097 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200193530	A2	20011206	WO 2001US17176	A	20010525	200231	B
AU 200165051	A	20011211	AU 200165051	A	20010525	200231	
US 20020129134	A1	20020912	US 2000208014	P	20000526	200262	
			US 2001866897	A	20010529		
EP 1290853	A2	20030312	EP 2001939545	A	20010525	200320	
			WO 2001US17176	A	20010525		

Priority Applications (No Type Date): US 2000208014 P 20000526; US 2001866897 A 20010529

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200193530	A2	E	33	H04L-029/06	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200165051	A	H04L-029/06	Based on patent WO 200193530	
US 20020129134	A1	G06F-015/173	Provisional application US 2000208014	

EP 1290853 A2 E H04L-029/06 Based on patent WO 200193530
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200193530 A2

NOVELTY - The method involves identifying a set of proxy points, where a each proxy point represents a given point in the Internet at which a trace originating from each of a set of mirror sites directed toward a given name server intersect. The proxy points are probed to generate given data. A download predictor score s generated for each mirror site based on the given data. An identification is made for which mirror provides a best download performance based on the download predictor score. A given name server IP address is associated with the identified mirror site. In response to an end user's initial content request to a given local name server, an IP address of the identified mirror site is returned.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for of routing a user's initial request to a content provider web site which is replicated at a set of mirror sites, and a method for managing global traffic redirection for a set of content providers operating mirrored sites.

USE - For high performance, fault tolerant content delivery. For balancing loads from mirrored data centers within a global computer network.

ADVANTAGE - Does not have any restriction of range of file sizes and download types and it makes intelligent use of ICMP probes of different sizes to effectively estimate packet loss.

DESCRIPTION OF DRAWING(S) - The figure shows high level illustration of the components of the GTM service.

pp; 33 DwgNo 2/7

Title Terms: GLOBE; LOAD; BALANCE; MIRROR; DATA; CENTRE; IDENTIFY; SET; POINT; POINT; REPRESENT; POINT; TRACE; ORIGIN; MIRROR; SITE; DIRECT; NAME ; SERVE; INTERSECT
Derwent Class: W01
International Patent Class (Main): **G06F-015/173** ; H04L-029/06
International Patent Class (Additional): G06F-017/30; H04L-029/12
File Segment: EPI

6/5/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014133659
WPI Acc No: 2001-617870/200172
XRPX Acc No: N01-460797

Plug and play computer system has configuration notification program that produces visual display informing user about suitable time for connecting peripheral device to computer

Patent Assignee: FUJITSU LTD (FUIT)
Inventor: MIYAZAKI T; **SUNDARAM R** ; YAMADA I
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 10061991	A1	20010628	DE 1061991	A	20001213	200172	B
JP 2001222502	A	20010817	JP 2000384611	A	20001219	200172	

Priority Applications (No Type Date): US 99467569 A 19991220
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 10061991	A1		38	G06F-015/177	
JP 2001222502	A		15	G06F-013/10	

Abstract (Basic): DE 10061991 A1

NOVELTY - A configuration notification program enables the reception of messages, and produces a visual display informing a user about the suitable time for connecting a peripheral device to a

computer. The configuration notification program is stored in the computer with a visual display and an external serial bus port.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a computer system for improving the reliability in a plug and play peripheral device for universal serial bus interface;

(b) a method for providing a notification concerning the status of the configuration process of the operating system of a computer;

(c) a method for informing a computer user concerning the status of a reconfiguration process;

(d) and a method for reducing the frequency of crashes of a universal serial bus in a computer system.

USE - Plug and play computer system.

ADVANTAGE - Improves reliability of configuration process for computer to which peripheral devices are connected over a serial bus interface. Provides user with real time information regarding the suitable time of peripheral device connection or the removal of the peripheral device.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of the plug and play computer system. (Drawing includes non-English language text).

pp; 38 DwgNo 0/15

Title Terms: PLUG; PLAY; COMPUTER; SYSTEM; CONFIGURATION; NOTIFICATION; PROGRAM; PRODUCE; VISUAL; DISPLAY; INFORMATION; USER; SUIT; TIME; CONNECT ; PERIPHERAL; DEVICE; COMPUTER

Derwent Class: T01

International Patent Class (Main): G06F-013/10; **G06F-015/177**

International Patent Class (Additional): G06F-013/14

File Segment: EPI

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Set     Items   Descripti
S1     137982   JITTER? OR LATENC? OR DISTORT? OR TEMPORAL()(SHIFT? OR VAR-
              IATION?)
S2    1465833   NETWORK? OR TRANSMISS? OR WAN OR INTERNET? OR INTRANET? OR
              HTTP? OR TCP? OR PACKET?
S3     210526   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
               TIMING?
S4    2087313   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5      31624   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
              EGRAL? OR INTERNAL OR INTRUSIV?)
S6    2423110   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7        108   S1 AND S2 AND S3 AND (S5 OR S6)
S8         16   S1(3N)S2 AND S5
S9        124   S7 OR S8
S10         1   S9 AND IC=G06F-015?
S11       124   S8 OR S9
S12        46   S11 AND (CALCULAT? OR DETERMIN? OR ESTIMAT? OR FORMULA? OR
               PREDICT? OR MEASUR?)
S13        11   S12 AND (PACKET? OR DATAGRAM? OR DATA()TRANSMISSION? OR HT-
               TP?)
S14        11   IDPAT (sorted in duplicate/non-duplicate order)
S15        11   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Oct 1976-2003/Oct(Updated 040202)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200410
         (c) 2004  Thomson Derwent
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15/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015544730 **Image available**
WPI Acc No: 2003-606886/200357
XRPX Acc No: N03-483896
Quality of service determination **system for** packet **communication network, has collector correlator that** measures **dropped** packets , **delay time and** jitter , **based on report** packet **transmitted from** passive **probes**
Patent Assignee: HERSCHLEB G (HERS-I); JOBSON R G (JOBS-I)
Inventor: HERSCHLEB G; JOBSON R G
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030107990	A1	20030612	US 200121853	A	20011212	200357	B

Priority Applications (No Type Date): US 200121853 A 20011212
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030107990	A1		9	H04J-001/16	

Abstract (Basic): US 20030107990 A1
NOVELTY - **Passive** probes are attached to multiple network connections in a **packet** communication network. A collector correlator transmits a control information **packet** and **measures** dropped **packets** , delay time, **jitter** and **packet** re-ordering, based on input **packet** transmitted from the **passive** codes.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for quality of service **determination** method.
USE - For **determining** quality of service of **packet** communication network.
ADVANTAGE - **Measures** the quality of service efficiently, without adding overhead to the data traffic on the **packet** communication network.
DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the probe.
pp; 9 DwgNo 2/4
Title Terms: QUALITY; SERVICE; **DETERMINE** ; SYSTEM; **PACKET** ; COMMUNICATE; NETWORK; COLLECT; CORRELATE; **MEASURE** ; DROP; **PACKET** ; DELAY; TIME; JITTER; BASED; REPORT; **PACKET** ; TRANSMIT; **PASSIVE** ; PROBE
Derwent Class: W01
International Patent Class (Main): H04J-001/16
International Patent Class (Additional): H04J-003/14
File Segment: EPI

15/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

014845031 **Image available**
WPI Acc No: 2002-665737/200271
XRPX Acc No: N02-526702
Latency passive calculation **apparatus correlates incoming with outgoing data** packet , **and computes** latency **period between detecting incoming data** packet **and detecting outgoing data** packet
Patent Assignee: NETWORKS ASSOC INC (NETW-N)
Inventor: KNOBBE R; PURTELL A; SCHWAB S
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020093917	A1	20020718	US 2001764807	A	20010116	200271	B

Priority Applications (No Type Date): US 2001764807 A 20010116
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020093917	A1		23	H04J-001/16	

Abstract (Basic): US 20020093917 A1
NOVELTY - A tap (80) detects an incoming data **packet** arriving at a unit under test (UUT) (30) from a network (10). The tap (80A) detects an outgoing data **packet** departing from the UUT. A latency **measurement** device (LMD) (100) correlates the incoming data **packet** with the outgoing data **packet** , and **calculates** the **latency** period between detecting the incoming data **packet** and detecting the outgoing data **packet** .
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(a) a method for **passively measuring** a **latency** for a **network** device in a network;
(b) and a computer program product for **passively measuring** the time required for a data **packet** to traverse a network device.
USE - For **measuring** performance of devices e.g. hubs, switches, routers, firewalls, servers on network.
ADVANTAGE - Allows implementation in computer system or other processing system using hardware, software or combination of both.
DESCRIPTION OF DRAWING(S) - The figure is a block diagram depicting an overview of a latency **measurement** device.
Network (10)
Unit under test (30)
Tap (80,80A)
Latency **measurement** device (100)
pp; 23 DwgNo 3/15
Title Terms: LATENT; **PASSIVE** ; **CALCULATE** ; APPARATUS; CORRELATE; INCOMING ; OUTGOING; DATA; **PACKET** ; COMPUTATION; LATENT; PERIOD; DETECT; INCOMING ; DATA; **PACKET** ; DETECT; OUTGOING; DATA; **PACKET**
Derwent Class: T01; W01
International Patent Class (Main): H04J-001/16
International Patent Class (Additional): H04J-003/14; H04L-012/26
File Segment: EPI

15/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014419854
WPI Acc No: 2002-240557/200229
Related WPI Acc No: 2002-034761; 2002-041765; 2002-240532
XRPX Acc No: N02-185712
Measuring jitter **in specific data** packet **flow in network by analyzing data fields in** packets **to identify flow at two network points and adding transmit and receive time codes to enable variations in transit time to be** measured
Patent Assignee: BRIX NETWORKS INC (BRIX-N); DESROCHERS S A (DESR-I); HEDAYAT K (HEDA-I); PYRIK D S (PYRI-I)
Inventor: DESROCHERS S A; HEDAYAT K; PYRIK D S; PYRIK D
Number of Countries: 094 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200188763	A1	20011122	WO 2001US40753	A	20010518	200229 B
AU 200159868	A	20011126	AU 200159868	A	20010518	200229
US 20020039371	A1	20020404	US 2001264354	P	20010126	200230
			US 2001860287	A	20010518	

Priority Applications (No Type Date): US 2001264354 P 20010126; US 2000205280 P 20000518; US 2001860287 A 20010518
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200188763	A1	E	24	G06F-017/30	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200159868	A		G06F-017/30	Based on patent WO 200188763
US 20020039371	A1		H04L-012/56	Provisional application US 2001264354

Abstract (Basic): WO 200188763 A1
NOVELTY - Transmission and receive time are associated with each **packet** in a flow received at a second point in a network. Inter-arrival times are **calculated** for each successive pair of **packets** received at the second point by subtracting the transmit times of the two **packets** , subtracting the receive times of the two **packets** and subtracting the results. A jitter value is then **calculated** as a smoothed version of two or more inter-arrival times.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for
(a) a method of **passively** identifying individual **packets** in an IP **packet** flow
(b) a system for **measuring** jitter characteristics of a specific data **packet** flow
USE - **Measuring jitter** in data **packet** flows.
ADVANTAGE - **Measures** jitter without changing the traffic or the behavior of the network.
pp; 24 DwgNo 0/2
Title Terms: **MEASURE** ; JITTER; SPECIFIC; DATA; **PACKET** ; FLOW; NETWORK; DATA; FIELD; **PACKET** ; IDENTIFY; FLOW; TWO; NETWORK; POINT; ADD; TRANSMIT ; RECEIVE; TIME; CODE; ENABLE; VARIATION; TRANSIT; TIME; **MEASURE**
Derwent Class: T01; W01
International Patent Class (Main): G06F-017/30; H04L-012/56
International Patent Class (Additional): H04J-003/06; H04J-003/14
File Segment: EPI

15/5/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008246661 **Image available**
WPI Acc No: 1990-133662/199018
XRPX Acc No: N90-103621
Non - intrusive **channel impairment analyser** - measures **signal jitter in band-limited data communications channel using adaptive line enhancer**
Patent Assignee: HEWLETT-PACKARD LTD (HEWP)
Inventor: CARDER N G; RHIND W G
Number of Countries: 004 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 366160	A	19900502	EP 89122987	A	19870106	199018	B

Priority Applications (No Type Date): GB 865576 A 19860306
Cited Patents: US 4381546; US 4555790
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 366160	A				

Designated States (Regional): DE FR GB IT

Abstract (Basic): EP 366160 A
The adaptive line enhancer is arranged to isolate **deterministic** components of the error signal, representing phase-error or amplitude error between input and output of the data recovery circuit, from background noise. The enhancer provides a fixed delay (50) arranged to receive the error signal and to supply a delayed error signal to the transversal filter (51).
A comparator (52) **determines** the difference between the signal input to the enhancer and that output by the transversal filter. A top coefficient updating circuit (53) adjusts the top coefficients of the transversal filter so as to minimise the difference **determined** by the comparator.
USE/ADVANTAGE - E.g. for telephone line QAM **data transmission** . Signal **jitter** is **measured** without interruption of channel traffic. (22pp Dwg.No.7/12)
Title Terms: NON; INTRUDE; CHANNEL; IMPAIR; ANALYSE; **MEASURE** ; SIGNAL; JITTER; BAND; LIMIT; DATA; COMMUNICATE; CHANNEL; ADAPT; LINE; ENHANCE
Index Terms/Additional Words: QAM
Derwent Class: W01
International Patent Class (Additional): H04L-001/20; H04L-027/06
File Segment: EPI

15/5/10 (Item 10 fr[redacted]file: 350)
DIALOG(R)File 350:Derwent WPIX

007294751
WPI Acc No: 1987-291758/198741
XRPX Acc No: N87-218572
Dejitteriser for digital data transmission **- has signal clocked into buffer by** jitter **clock pulse signal and clocked out by local clock pulse signal**
Patent Assignee: SOTAS INC (SOTA-N)
Inventor: JOHNSON T H; MANNAS E L
Number of Countries: 018 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 8706085	A	19871008	WO 87US609	A	19870324	198741	B
AU 8772066	A	19871020				198803	
US 4718074	A	19880105	US 86843668	A	19860325	198803	

Priority Applications (No Type Date): US 86843668 A 19860325
Cited Patents: US 3420956; US 4054747; US 4270183; US 4434498; US 4596026
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 8706085	A	E	17		

Designated States (National): AU BR DK FI JP KR NO
Designated States (Regional): AT BE CH DE FR GB IT LU NL SE

US 4718074	A		5		

Abstract (Basic): WO 8706085 A

The dejitteriser **separates** a stream of given data bits and a given clock pulse signal associated with it from a given signal. A local clock pulse signal is produced. A buffer (4) stores the given data bits in response to the pulses of a clock signal and outputs the data bits in response to the pulses of the local clock pulse signal. A counter (32) detects the pulses of the given and local clock pulse signals. It **determines** the number of data bits stored in the buffer as a function of the difference between the number of given clock pulses and local clock pulses supplied to the buffer.

It controls the time at which the given and local clock pulses are detected by the counter. This prevents simultaneously detecting a local clock pulse and a given clock pulse, provides an accurate **determination** of the number of given data bits in the buffer. The frequency of the local clock pulse signal is varied as a function of the phase relation between the local signal and the given signal so that buffer overflow is prevented.

USE/ADVANTAGE - For digital **transmission** of voice and data in e.g. T4 fibre optic system. Simple, reliable correction for **jitter** .

1/1

Title Terms: DIGITAL; DATA; **TRANSMISSION** ; SIGNAL; CLOCK; BUFFER; **JITTER** ; CLOCK; PULSE; SIGNAL; CLOCK; LOCAL; CLOCK; PULSE; SIGNAL
Derwent Class: W01
International Patent Class (Additional): H03D-003/24; H04L-007/00; H04L-025/36
File Segment: EPI

```
Set     Items   Description
S1     137982   JITTER? OR LATENC? OR DISTORT? OR TEMPORAL()(SHIFT? OR VAR-
            IATION?)
S2    1465833   NETWORK? OR TRANSMISS? OR WAN OR INTERNET? OR INTRANET? OR
            HTTP? OR TCP? OR PACKET?
S3     210526   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
             TIMING?
S4    2087313   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5      31624   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
            EGRAL? OR INTERNAL OR INTRUSIV?)
S6    2423110   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7          9   S1(4N)S2 AND S4 AND S5
S8          3   S1(4N)S2 AND S3(2N)S6
S9         12   S7 OR S8
S10         7   S9 AND IC=(G06F? OR H04L?)
S11         7   IDPAT (sorted in duplicate/non-duplicate order)
S12         7   IDPAT (primary/non-duplicate records only)
S13        32   S1 AND S2 AND (S3(2N)S6 OR S5) AND (S4 OR CALCULAT? OR EST-
            IMAT? OR PREDICT?)
S14        22   S13 NOT S9
S15        11   S14 AND IC=(G06F? OR H04L?)
S16        11   IDPAT (sorted in duplicate/non-duplicate order)
S17        11   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Oct 1976-2003/Oct(Updated 040202)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200410
         (c) 2004  Thomson Derwent
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17/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012411569 **Image available**
WPI Acc No: 1999-217677/199919
XRPX Acc No: N99-160534
Local clock stabilization for data receiver in data transmission **system**
Patent Assignee: MITEL CORP (MTLC)
Inventor: JIN G Q; REESOR G J
Number of Countries: 006 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2330736	A	19990428	GB 9722380	A	19971024	199919	B
DE 19848610	A1	19990429	DE 1048610	A	19981021	199923	
FR 2770355	A1	19990430	FR 9813231	A	19981019	199924	
CA 2249826	A1	19990424	CA 2249826	A	19981008	199940	
SE 9803639	A	19990425	SE 983639	A	19981023	199950	
US 6138244	A	20001024	US 98163248	A	19980930	200055	
GB 2330736	B	20020410	GB 9722380	A	19971024	200232	

Priority Applications (No Type Date): GB 9722380 A 19971024
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2330736	A		16	H04L-007/04	
DE 19848610	A1			H04L-007/04	
FR 2770355	A1			H04L-007/00	
CA 2249826	A1	E		H04L-007/08	
SE 9803639	A			H04L-007/027	
US 6138244	A			G06F-001/12	
GB 2330736	B			H04L-007/04	

Abstract (Basic): GB 2330736 A
NOVELTY - The method involves adaptively **estimating** a precursor timing location of a reference timing signal from a transmitter, at current time less one baud **interval** , using a one tap least mean square (LMS) algorithm. A dead zone, covering the timing locations controlled by the precursor **estimate** , is determined. The local clock is adjusted only when the **timing** location falls **outside** the dead zone.
USE - For data **transmission** system with a transmitter which transmits a reference timing signal with a data signal, and a data receiver with a local clock.
ADVANTAGE - The method results in reduced **jitter** , since only noise sufficient to move the subsequent timing location out of the dead zone causes a wrong timing movement.
DESCRIPTION OF DRAWING(S) - The figure shows a flow chart indicating a timing recovery process.
pp; 16 DwgNo 3/3
Title Terms: LOCAL; CLOCK; STABILISED; DATA; RECEIVE; DATA; **TRANSMISSION** ; SYSTEM
Derwent Class: W01
International Patent Class (Main): **G06F-001/12** ; **H04L-007/00** ; **H04L-007/027** ; **H04L-007/04** ; **H04L-007/08**
International Patent Class (Additional): **G06F-001/04** ; **H04L-001/00**
File Segment: EPI

17/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010036317 **Image available**
WPI Acc No: 1994-304028/199438
XRPX Acc No: N94-239063
Calibration system for TDMA system with passive **optical** network - **uses initial calibration time slot of extended** duration **and data flow reduction to prevent cell** jitter
Patent Assignee: SIEMENS AG (SIEI)
Inventor: GLADE M; HARTL B; HORBACH C; KELLER H·
Number of Countries: 009 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4405461	C1	19941006	DE 4405461	A	19940221	199438	B
EP 668676	A1	19950823	EP 95102015	A	19950214	199538	
EP 668676	B1	19960724	EP 95102015	A	19950214	199634	
DE 59500005	G	19960829	DE 500005	A	19950214	199640	
			EP 95102015	A	19950214		
ES 2091145	T3	19961016	EP 95102015	A	19950214	199647	

Priority Applications (No Type Date): DE 4405461 A 19940221
Cited Patents: 1.Jnl.Ref; EP 318333; WO 9222151; WO 9319540
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4405461	C1		5	H04J-003/14	
EP 668676	A1	G	5	H04J-014/08	
Designated States (Regional): AT BE CH DE ES FR GB IT LI					
EP 668676	B1	G	6	H04J-014/08	
Designated States (Regional): AT BE CH DE ES FR GB IT LI					
DE 59500005	G			H04J-014/08	Based on patent EP 668676
ES 2091145	T3			H04J-014/08	Based on patent EP 668676

Abstract (Basic): DE 4405461 C
The calibration system uses an initial calibration time slot with a **duration** which is longer than that of the calibration time slots used during operation of the system. Before the initial calibration the data flow from the central unit (OLT) to the exchange is reduced with temporary storage of the untransmitted data, for **transmission** during the initial calibration. The data received at the peripheral for **transmission** to the central unit is stored during the initial calibration and transmitted at a slightly increased data rate after the latter.
Pref. the initial calibration time slot has at least double the **duration** of the successive calibration time slots.
ADVANTAGE - Prevents cell **jitter** due to calibration gaps.
Dwg.1/1
Title Terms: CALIBRATE; SYSTEM; TDMA; SYSTEM; **PASSIVE** ; OPTICAL; **NETWORK** ; INITIAL; CALIBRATE; TIME; SLOT; EXTEND; **DURATION** ; DATA; FLOW; REDUCE; PREVENT; CELL; **JITTER**
Derwent Class: W01
International Patent Class (Main): H04J-003/14; H04J-014/08
International Patent Class (Additional): **H04L-001/14**
File Segment: EPI

12/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014419854
WPI Acc No: 2002-240557/200229
Related WPI Acc No: 2002-034761; 2002-041765; 2002-240532
XRPX Acc No: N02-185712
Measuring jitter **in specific data** packet **flow in network by analyzing data fields in packets to identify flow at two network points and adding transmit and receive time codes to enable variations in transit time to be** measured
Patent Assignee: BRIX NETWORKS INC (BRIX-N); DESROCHERS S A (DESR-I); HEDAYAT K (HEDA-I); PYRIK D S (PYRI-I)
Inventor: DESROCHERS S A; HEDAYAT K; PYRIK D S; PYRIK D
Number of Countries: 094 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200188763	A1	20011122	WO 2001US40753	A	20010518	200229	B
AU 200159868	A	20011126	AU 200159868	A	20010518	200229	
US 20020039371	A1	20020404	US 2001264354	P	20010126	200230	
			US 2001860287	A	20010518		

Priority Applications (No Type Date): US 2001264354 P 20010126; US 2000205280 P 20000518; US 2001860287 A 20010518
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200188763	A1	E	24	G06F-017/30	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200159868	A		G06F-017/30	Based on patent WO 200188763
US 20020039371	A1		H04L-012/56	Provisional application US 2001264354

Abstract (Basic): WO 200188763 A1
NOVELTY - Transmission and receive time are associated with each packet in a flow received at a second point in a network. Inter-arrival times are calculated for each successive pair of packets received at the second point by subtracting the transmit times of the two packets, subtracting the receive times of the two packets and subtracting the results. A jitter value is then calculated as a smoothed version of two or more inter-arrival times.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for
(a) a method of **passively** identifying individual packets in an IP packet flow
(b) a system for **measuring** jitter characteristics of a specific data packet flow
USE - **Measuring jitter** in data **packet** flows.
ADVANTAGE - **Measures** jitter without changing the traffic or the behavior of the network.
pp; 24 DwgNo 0/2
Title Terms: **MEASURE** ; JITTER; SPECIFIC; DATA; PACKET; FLOW; NETWORK; DATA ; FIELD; PACKET; IDENTIFY; FLOW; TWO; NETWORK; POINT; ADD; TRANSMIT; RECEIVE; TIME; CODE; ENABLE; VARIATION; TRANSIT; TIME; **MEASURE**
Derwent Class: T01; W01
International Patent Class (Main): **G06F-017/30** ; **H04L-012/56**
International Patent Class (Additional): H04J-003/06; H04J-003/14
File Segment: EPI

12/5/3 **(Item 3 from file: 350)**

013067293 **Image available**
WPI Acc No: 2000-239165/200021
XRPX Acc No: N00-179575

Distributed system with enhancements to its time synchronization; uses circuitry that obtains local time value from local clock when unique timing point is detected

Patent Assignee: HEWLETT-PACKARD CO (HEWP); AGILENT TECHNOLOGIES INC (AGIL-N)
Inventor: EIDSON J C
Number of Countries: 027 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 986202	A2	20000315	EP 99111339	A	19990610	200021	B
JP 2000099485	A	20000407	JP 99239133	A	19990826	200028	
US 6278710	B1	20010821	US 98151017	A	19980910	200150	

Priority Applications (No Type Date): US 98151017 A 19980910
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 986202	A2	E	14	H04J-003/06	
	Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				
JP 2000099485	A		10	G06F-015/177	
US 6278710	B1			H04L-012/56	

Abstract (Basic): EP 986202 A2

NOVELTY - A second node (14) includes a local clock (36) and circuitry that obtains a local time value from the local clock (36) when the unique timing point (52) is detected. The local time value is discarded if a delimiter (54) is not detected, such that a difference between a time-stamp (50) of the follow up packet and the local time value if not discarded indicates a relative synchronization of the local clocks (22,36).

USE - In enhancements to time synchronization in distributed systems.

ADVANTAGE - Improves the accuracy in time synchronization by **separating** the unique **timing** point from a delimiter for the timing data **packet** , compensating for **jitter** associated with communication circuitry in the distributed system including jitter associated with physical interfaces and gateways in the distributed system.

DESCRIPTION OF DRAWING(S) - The drawing shows a distributed system which includes a pair of nodes interconnected via a communication link.

first node (12)
second node (14)
local clock (22)
local clock (36)
time-stamp (50)
unique timing point (52)
delimiter (54)
pp; 14 DwgNo 1/7

Title Terms: DISTRIBUTE; SYSTEM; TIME; CIRCUIT; OBTAIN; LOCAL; TIME; VALUE; LOCAL; CLOCK; UNIQUE; TIME; POINT; DETECT
Derwent Class: T01; W01
International Patent Class (Main): **G06F-015/177** ; H04J-003/06; **H04L-012/56**
International Patent Class (Additional): **G06F-001/14** ; **G06F-015/163**
File Segment: EPI

12/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008246661 **Image available**
WPI Acc No: 1990-133662/199018
XRPX Acc No: N90-103621

Non - intrusive **channel impairment analyser** - measures **signal jitter in band-limited data communications channel using adaptive line enhancer**

Patent Assignee: HEWLETT-PACKARD LTD (HEWP)
Inventor: CARDER N G; RHIND W G

Number of Countries: 004 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 366160	A	19900502	EP 89122987	A	19870106	199018	B

Priority Applications (No Type Date): GB 865576 A 19860306
Cited Patents: US 4381546; US 4555790
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 366160	A				

Designated States (Regional): DE FR GB IT

Abstract (Basic): EP 366160 A

The adaptive line enhancer is arranged to isolate deterministic components of the error signal, representing phase-error or amplitude error between input and output of the data recovery circuit, from background noise. The enhancer provides a fixed delay (50) arranged to receive the error signal and to supply a delayed error signal to the transversal filter (51).

A comparator (52) determines the difference between the signal input to the enhancer and that output by the transversal filter. A top coefficient updating circuit (53) adjusts the top coefficients of the transversal filter so as to minimise the difference determined by the comparator.

USE/ADVANTAGE - E.g. for telephone line QAM data **transmission** . Signal **jitter** is **measured** without interruption of channel traffic. (22pp Dwg.No.7/12)

Title Terms: NON; INTRUDE; CHANNEL; IMPAIR; ANALYSE; **MEASURE** ; SIGNAL; JITTER; BAND; LIMIT; DATA; COMMUNICATE; CHANNEL; ADAPT; LINE; ENHANCE
Index Terms/Additional Words: QAM
Derwent Class: W01
International Patent Class (Additional): **H04L-001/20** ; **H04L-027/06**
File Segment: EPI

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Set     Items   Description
S1        595   JITTER? OR LATENC? OR DISTORT? OR TEMPORAL()(SHIFT? OR VAR-
              IATION?)
S2      56732   NETWORK? OR TRANSMISS? OR WAN OR INTERNET? OR INTRANET? OR
              HTTP? OR TCP? OR PACKET?
S3        593   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
              TIMING?
S4       4650   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5        237   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
              EGRAL? OR INTERNAL OR INTRUSIV?)
S6       8346   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7          2   S1 AND S2 AND S4 AND S5
S8          1   S1 AND S2 AND S3 AND S6
S9          2   S7 OR S8
File 256:SoftBase:Reviews,Companies&Prods. 82-2004/Jan
         (c)2004 Info.Sources Inc
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             HTTP? OR TCP? OR PACKET?
S3     779434   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
              TIMING?
S4    9371092   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5     297351   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
             EGRAL? OR INTERNAL OR INTRUSIV?)
S6    6126299   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7        227   S1(4N)S2 (15N) S4 AND S5
S8         13   S1(4N)S2 (15N) S3(2N)S6
S9        240   S7 OR S8
S10         0   S9 AND IC=(G06F? OR H04L?)
S11        77   S1 (15N) S2 (15N) (S3(2N)S6 OR S5) (15N) (S4 OR CALCULAT? -
              OR ESTIMAT? OR PREDICT?)
S12        52   S1(4N)S2(15N)S4(15N)S5
S13        93   S8 OR S11 OR S12
S14        43   RD (unique items)
S15        21   S14 NOT PY>2000
S16        20   S15 NOT PD=20000926:20020926
S17        20   S16 NOT PD=20020926:20040301
File 275:Gale Group Computer DB(TM) 1983-2004/Feb 13
         (c) 2004 The Gale Group
File  47:Gale Group Magazine DB(TM) 1959-2004/Feb 12
         (c) 2004 The Gale group
File  75:TGG Management Contents(R) 86-2004/Feb W1
         (c) 2004 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2004/Feb 13
         (c) 2004 The Gale Group
File  16:Gale Group PROMT(R) 1990-2004/Feb 13
         (c) 2004 The Gale Group
File 624:McGraw-Hill Publications 1985-2004/Feb 12
         (c) 2004 McGraw-Hill Co. Inc
File 484:Periodical Abs Plustext 1986-2004/Feb W3
         (c) 2004 ProQuest
File 613:PR Newswire 1999-2004/Feb 13
         (c) 2004 PR Newswire Association Inc
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 141:Readers Guide 1983-2004/Jan
         (c) 2004 The HW Wilson Co
File 239:Mathsci 1940-2004/Mar
         (c) 2004 American Mathematical Society
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 696:DIALOG Telecom. Newsletters 1995-2004/Feb 12
         (c) 2004 The Dialog Corp.
File 553:Wilson Bus. Abs. FullText 1982-2004/Jan
         (c) 2004 The HW Wilson Co
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Feb 13
         (c) 2004 The Gale Group
File 674:Computer News Fulltext 1989-2004/Feb W2
         (c) 2004 IDG Communications
File  88:Gale Group Business A.R.T.S. 1976-2004/Feb 13
         (c) 2004 The Gale Group
File 369:New Scientist 1994-2004/Feb W2
         (c) 2004 Reed Business Information Ltd.
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 635:Business Dateline(R) 1985-2004/Feb 13
         (c) 2004 ProQuest Info&Learning
File  15:ABI/Inform(R) 1971-2004/Feb 13
         (c) 2004 ProQuest Info&Learning
File   9:Business & Industry(R) Jul/1994-2004/Feb 12
         (c) 2004 Resp. DB Svcs.
File  13:BAMP 2004/Jan W4
```

17/3,K/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01200776 SUPPLIER NUMBER: 04773855
How to overcome jitter on a token-ring LAN.
Bridge, Robert F.
Data Communications, v16, n4, p137(4)
April, 1987
ISSN: 0363-6399 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

...ABSTRACT: around the token ring is the main limiting factor on the size of token rings. **Jitter** is a short-term inaccuracy in **timing** in a data stream. There are three ways, in theory, to deal with **jitter** : break up long patterns of ones and zeros; **separate** the **network** into multiple rings, and connect each ring with bridges; or incorporate jitter attenuation integrated circuits...

17/3,K/12 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

02009010 52200497
SLA enforcement tools to the rescue
Nance, Barry
Network World v17n14 PP: 69-73 Apr 3, 2000
ISSN: 0887-7661 JRNL CODE: NWW
WORD COUNT: 3906

...TEXT: that let us see and account for even the shortest bursts of activity, it accurately **measured** WAN usage to show our peaks and valleys of data transmission as a percentage of...used this information to display a recommendation for the bandwidth we should have for each **WAN** link.

Measuring and analyzing **WAN** delay is one of Visual UpTime's strong suits. On a per-. circuit basis, the **WAN** Delay tool determined end-to-end delay times in a **nonintrusive** manner. From one **WAN** link telephone company **network** interface to the other, the tool separated the customer premises equipment **latency** from the **WAN** **latency** to reveal the exact **WAN** delay we experienced in our **WAN** links.

Finding the OpenLane
Paradyne's OpenLane is an excellent Java-based SLA monitoring tool...

```
Set     Items   Description
S1     505759   JITTER? OR LATENC? OR DISTORT? OR TEMPORAL()(SHIFT? OR VAR-
             IATION?)
S2    3707919   NETWORK? OR TRANSMISS? OR WAN OR INTERNET? OR INTRANET? OR
             HTTP? OR TCP? OR PACKET?
S3     183594   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
              TIMING?
S4    9562408   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5     274071   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
             EGRAL? OR INTERNAL OR INTRUSIV?)
S6    2716799   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7         66   S1  (4N) S2  AND S4 AND S5
S8          4   S1(4N)S2  AND S3(2N)S6
S9        500   S1  AND S2  AND (S3(2N)S6 OR S5)  AND (S4 OR CALCULAT? OR -
             ESTIMAT? OR PREDICT?)
S10        55   S9 AND (PACKET? OR DATAGRAM? OR DATA()(STREAM? OR GRAM?) OR
              DATASTREAM?)
S11       100   S7 OR S8 OR S10
S12        64   RD (unique items)
S13        34   S12 NOT PY>2000
S14        34   S13 NOT PD=20000926:20020926
S15        34   S14 NOT PD=20020926:20040301
File   8:Ei Compendex(R) 1970-2004/Feb W1
         (c) 2004 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2004/Jan
         (c) 2004 ProQuest Info&Learning
File  65:Inside Conferences 1993-2004/Feb W2
         (c) 2004 BLDSC all rts. reserv.
File   2:INSPEC 1969-2004/Feb W1
         (c) 2004 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2004/Feb W1
         (c)2004 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2004/Feb 11
         (c) 2004 The Gale Group
File 233:Internet & Personal Comp. Abs. 1981-2003/Sep
         (c) 2003 EBSCO Pub.
File 144:Pascal 1973-2004/Feb W1
         (c) 2004 INIST/CNRS
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  34:SciSearch(R) Cited Ref Sci 1990-2004/Feb W2
         (c) 2004 Inst for Sci Info
File  62:SPIN(R) 1975-2004/Dec W3
         (c) 2004 American Institute of Physics
File  99:Wilson Appl. Sci & Tech Abs 1983-2004/Jan
         (c) 2004 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2004/Jan W4
         (c) 2004 FIZ TECHNIK
```

15/5/1 (Item 1 from File: 8)
DIALOG(R)File 8:Ei Compendex(R)

05382736 E.I. No: EIP99104832102
Title: DTM: new dynamic transfer mode using dynamically assigned short-hold time-slot relay
Author: Yamanaka, Naoaki; Shiomoto, Kohei
Corporate Source: NTT Network Service Systems Lab, Tokyo, Jpn
Conference Title: Proceedings of the IEEE GLOBECOM 1998 - The Bridge to the Global Integration
Conference Location: Sydney, NSW, Aust Conference Date: 19981108-19981112
Sponsor: IEEE Communications Society; Telstra; ERICSSON; SIEMENS; et al.
E.I. Conference No.: 55358
Source: Conference Record / IEEE Global Telecommunications Conference v 1 1998. p 375-380
Publication Year: 1998
CODEN: CRIEET
Language: English
Document Type: JA; (Journal Article) Treatment: G; (General Review)
Journal Announcement: 9911W3
Abstract: This paper proposes a new high-speed **network** architecture called Dynamic Transfer Mode, DTM. At the entrance of the DTM **network** , destination addresses such as IP addresses are converted into DTM routing information and attached to the **packet** header. In a DTM **network** , a connection is set up on-the-fly by sending a series of routing link identifiers to the destination, so burst data transfers like WWW traffic are efficiently carried. A connection between adjacent nodes is created and released dynamically within the burst transfer **period** . This yields higher statistical multiplexing gain and improved bandwidth efficiency compared to with conventional STM. Time division multiplexing is utilized so there is no delay **jitter** or cell loss, which are major drawbacks of Asynchronous Transfer Mode. This paper analyzes the performance of a DTM **network** and describes an implemented switching system. Because a DTM **network** uses source-routing and **passive** STM switching, it simplifies the core transit switch while localizing intelligence to edge nodes. A simplified core transit switch is well suited for future high-speed backbone **networks** . (Author abstract) 9 Refs.
Descriptors: Broadband **networks** ; Data transfer; Switching systems; Time division multiplexing; World Wide Web; Telecommunication traffic
Identifiers: Dynamic transfer mode; Dynamically assigned short hold time slot relay; High speed **network** architecture; Routing information; **Packet** header; Routing link identifiers; Burst transfer **period** ; Delay **jitter** ; Source routing
Classification Codes:
723.2 (Data Processing)
718 (Telephone & Line Communications); 723 (Computer Software)
71 (ELECTRONICS & COMMUNICATIONS); 72 (COMPUTERS & DATA PROCESSING)

15/5/7 (Item 7 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04363100 E.I. No: EIP96033107148
Title: Jitter analysis for two methods of synchronization for external timing **injection**
Author: Walker, Jacqueline; Cantoni, Antonio
Corporate Source: Curtin Univ of Technology, Bentley, Aust
Source: IEEE Transactions on Communications v 44 n 2 Feb 1996. p 269-276
Publication Year: 1996
CODEN: IECMBT ISSN: 0090-6778
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)
Journal Announcement: 9605W3
Abstract: The jitter generated by two different approaches to synchronization of an **external timing** source is analyzed. The two approaches are: the use of conventional stuffing and the use of a simpler frame sampling synchronizer. It is shown that these two approaches have the same jitter power density spectrum. The result is obtained using a new time domain method developed in the paper. Exact expressions for the jitter on the synchronized **external timing** source are obtained. Furthermore, the effect of quantization in the conventional stuffing synchronizer on the jitter expressions obtained is also explored. Jitter generated by the frame sampling synchronizer is also analyzed using the time domain method, which again produces an exact expression. In the case where certain parameters of the two approaches are related, the location of spectral lines in their respective jitter spectra is shown to be identical. It is also shown that both approaches to synchronization introduce the so-called waiting-time jitter. (Author abstract) 8 Refs.
Descriptors: *Synchronization; Timing circuits; Time domain analysis; Clocks; Buffer storage; Phase locked loops; Mathematical models; Data transfer
Identifiers: Jitter analysis; **External timing** injection; Frame sampling synchronizer; Waiting time **jitter** ; Data **networks** ; Data entering; Quantization
Classification Codes:
731.1 (Control Systems); 713.4 (Pulse Circuits); 921.6 (Numerical Methods); 943.3 (Special Purpose Instruments); 722.1 (Data Storage, Equipment & Techniques); 713.5 (Other Electronic Circuits)
731 (Automatic Control Principles); 713 (Electronic Circuits); 921 (Applied Mathematics); 943 (Mechanical & Miscellaneous Measuring Instruments); 722 (Computer Hardware)
73 (CONTROL ENGINEERING); 71 (ELECTRONICS & COMMUNICATIONS); 92 (ENGINEERING MATHEMATICS); 94 (INSTRUMENTS & MEASUREMENT); 72 (COMPUTERS & DATA PROCESSING)

15/5/10 (Item 10 fr[redacted]file: 8)
DIALOG(R)File 8:Ei Compendex(R)

01523793 E.I. Monthly No: EI8406052980 E.I. Yearly No: EI84034004
Title: PERFORMANCE EVALUATION IN AN ISDN - DIGITAL TRANSMISSION IMPAIRMENTS.
Author: Huckett, P.
Corporate Source: Hewlett Packard Ltd, West Lothian, Scotl
Source: Radio and Electronic Engineer v 54 n 2 Feb 1984 p 97-106
Publication Year: 1984
CODEN: RDEEA4 ISSN: 0033-7722
Language: ENGLISH
Journal Announcement: 8406
Abstract: The performance evaluation of the future Integrated Services Digital Network is considered. Emphasis is given to both the **measurement** and the instrumentation necessary to quantify the most important digital **transmission** impairments, **jitter** and errors. The trend towards **non - intrusive measurement** and automated testing made possible by advances in digital technology is reviewed. 13 refs.
Descriptors: DIGITAL COMMUNICATION SYSTEMS--*Performance; ELECTRIC NETWORKS, COMMUNICATION-- **Measurements** ; AUTOMATIC TESTING
Identifiers: DIGITAL TRANSMISSION SYSTEM; INTEGRATED SERVICES DIGITAL NETWORK; **NON - INTRUSIVE MEASUREMENT**
Classification Codes:
716 (Radar, Radio & TV Electronic Equipment); 718 (Telephone & Line Communications); 942 (Electrical & Electronic Measuring Instruments); 723 (Computer Software)
71 (ELECTRONICS & COMMUNICATIONS); 94 (INSTRUMENTS & MEASUREMENT); 72 (COMPUTERS & DATA PROCESSING)

15/5/16 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

01167114 INSPEC Abstract Number: B78014079
Title: Passive network **to** measure distortion
Author(s): Cole, J.B.
Journal: Wireless World vol.84, no.1505 p.60
Publication Date: Jan. 1978 Country of Publication: UK
CODEN: WIWOAA ISSN: 0043-6062
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: Describes a circuit for distortion **measurements** of low impedance sources at 1 kHz using an audio millivoltmeter. A high pass LC filter removes low frequency noise in the input signal and compensates for the loss of harmonic frequencies. It also contributes about 10 dB to the rejection at 1 kHz so that the null adjustments are less critical. If used for setting the bias and recording levels of a tape recorder, it is much less affected by transport speed variations than a conventional instrument. Dynamic range is large because only a small fraction of the input signal appears across the inductor. The prototype used 2% metal oxide resistors and 5% polycarbonate capacitors. After three years use without adjustment the circuit has remained level to within +or-3% over the first twelve harmonics and still **measures** t.h.d. to below 0.05%. (0 Refs)
Subfile: B
Descriptors: audio equipment; electric distortion **measurement**
Identifiers: low impedance sources; audio millivoltmeter; first twelve harmonics; **measures** t.h.d. to below 0.05%; distortion **measurement** ; **passive** networks; audio equipment test circuit; 1 kHz signal **measurement** ; tape recorder adjustment
Class Codes: B1290 (Special purpose electronic circuits); B6450 (Audio equipment and systems); B7310Z (Other electric variables)

```
Set     Items   Description
S1      97406   JITTER? OR LATENC? OR DISTORT? OR TEMPORAL()(SHIFT? OR VAR-
             IATION?)
S2     463562   NETWORK? OR TRANSMISS? OR WAN OR INTERNET? OR INTRANET? OR
             HTTP? OR TCP? OR PACKET?
S3     132050   TIMESTAMP? OR TIME()STAMP? OR DATESTAMP? OR DATE()STAMP? OR
              TIMING?
S4     922232   MEASUR? OR DURATION? OR INTERVAL? OR PERIOD?
S5      64772   PASSIVE? OR NONINTRUSIV? OR ("NOT" OR NON)()(EMBED? OR INT-
             EGRAL? OR INTERNAL OR INTRUSIV?)
S6    1278803   SEPARAT? OR EXTERNAL? OR OUTSIDE? OR UNATTACH?
S7        172   S1(4N)S2 (15N) S4 AND S5
S8         27   S1(4N)S2 (15N) S3(2N)S6
S9        199   S7 OR S8
S10       131   S9 AND IC=(G06F? OR H04L?)
S11        37   S1 (15N) S2 (15N) (S3(2N)S6 OR S5) (15N) (S4 OR CALCULAT? -
               OR ESTIMAT? OR PREDICT?)
S12        20   S1(4N)S2(15N)S4(15N)S5
S13        38   (S8 OR S12 OR S11) AND IC=(G06F? OR H04L?)
S14        38   IDPAT (sorted in duplicate/non-duplicate order)
S15        38   IDPAT (primary/non-duplicate records only)
File 348:EUROPEAN PATENTS 1978-2004/Feb W01
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040212,UT=20040205
         (c) 2004 WIPO/Univentio
```

15/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01127584
Enhancements to time synchronization in distributed systems
Verbesserungen der Zeitsynchronisierung in verteilten Systemen
Ameliorations portees a la synchronisation temporelle dans des systemes distribues
PATENT ASSIGNEE:
Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto, California 94304, (US), (Applicant designated States: all)
INVENTOR:
Eidson, John C., 3294 Ross Road, Palo Alto,Ca 94303, (US)
LEGAL REPRESENTATIVE:
Schoppe, Fritz, Dipl.-Ing. (55463), Schoppe, Zimmermann & Stockeler Patentanwalte Postfach 71 08 67, 81458 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 986202 A2 000315 (Basic)
APPLICATION (CC, No, Date): EP 99111339 990610;
PRIORITY (CC, No, Date): US 151017 980910
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04J-003/06; **G06F-001/14**
ABSTRACT EP 986202 A2

A variety of enhancements to a time synchronization protocol for a distributed system(10) or (100) including techniques for improving accuracy by **separating** a unique **timing** point (52) from a delimiter 54 for the **timing** data **packet** (18). The enhancements include techniques that compensate for **jitter** associated with communication circuitry in the distributed system (10) or (100) including **jitter** associated with physical interfaces and gateways in the distributed system. These techniques may involve specialized circuitry in the communication circuitry to compensate for jitter or special processing of received timing data packets or the introduction of follow up packets (16) that inform receiving nodes of **measured** jitter or a combination of these techniques.

ABSTRACT WORD COUNT: 112
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Assignee:	010418 A2	Transfer of rights to new applicant: Agilent Technologies, Inc. (2885687) 395 Page Mill Road Palo Alto, CA 94303 US
Application:	20000315 A2	Published application without search report
Assignee:	011010 A2	Transfer of rights to new applicant: Agilent Technologies, Inc. (a Delaware corporation) (2885689) 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	010801 A2	Transfer of rights to new applicant: Agilent Technologies Inc. (2929951) a Delaware Corporation 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	010808 A2	Transfer of rights to new applicant: Agilent Technologies Inc. a Delaware Corporation (2929950) 395 Page Mill Road Palo Alto, CA 94303 US

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200011	1176
SPEC A	(English)	200011	3438
Total word count - document A			4614
Total word count - document B			0
Total word count - documents A + B			4614

...INTERNATIONAL PATENT CLASS: **G06F-001/14**

...ABSTRACT synchronization protocol for a distributed system(10) or (100) including techniques for improving accuracy by **separating** a unique **timing** point (52) from a delimiter 54 for the **timing** data **packet** (18). The enhancements include techniques that compensate for **jitter** associated with communication circuitry in the distributed system (10) or (100) including **jitter** associated with physical interfaces and gateways in the distributed system. These techniques may involve specialized...

...data packets or the introduction of follow up packets (16) that inform receiving nodes of **measured** jitter or a combination of these techniques.

...SPECIFICATION unique timing point is detected. The difference between the time-stamp from the follow up **packet** and the local time value indicates a relative synchronization of the local clocks in the...

...nodes.

The enhancements disclosed herein include techniques for improving the accuracy in time synchronization by **separating** the unique **timing** point from a delimiter for the **timing** data **packet** . The enhancements include techniques that compensate for **jitter** associated with communication circuitry in the distributed system including **jitter** associated with physical interfaces and gateways in the distributed system. These techniques may involve specialized...

...timing data packets or the introduction of follow up packets that inform receiving nodes of **measured** jitter or a combination of these techniques.

Other features and advantages of the present invention...

15/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00770510
Timing in a data communications network
Synchronisierung in einem Datenkommunikationsnetzwerk
Synchronisation dans un reseau de communication de donnees
PATENT ASSIGNEE:
Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto, California 94304, (US), (applicant designated states: DE;FR;GB)
INVENTOR:
Eidson, John C., 3294 Ross Road, Palo Alto, CA 94303, (US)
Dara-Abrams, Joseph A., 961 Andover Way, Los Altos, CA 94024, (US)
Woods, Stanley P., 669 Barto Street, Santa Clara, CA 95051, (US)
Cutler, Leonard S., 26944 Almaden Court, Los Altos Hills, CA 94022, (US)
Giffard, Robin P., 770 Anderson Drive, Los Altos, CA 94024, (US)
Johnson, James L., 558 Sugarload Road, Scotts Valley, CA 95066, (US)
LEGAL REPRESENTATIVE:
Jehan, Robert et al (72663), Williams, Powell & Associates, 34 Tavistock Street, London WC2E 7PB, (GB)
PATENT (CC, No, Kind, Date): EP 722233 A2 960717 (Basic)
EP 722233 A3 971126
APPLICATION (CC, No, Date): EP 95309322 951220;
PRIORITY (CC, No, Date): US 360508 941221
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H04J-003/06; **G06F-001/14**

ABSTRACT EP 722233 A2
A data communication network comprises a local clock (22) within a node (2) of the network which may be synchronized and syntonized by any node in the network. Each node contains a time packet detector (6) that detects and recognizes timing data packets and produces a recognition signal. Each node has a time server (10) that includes the local clock (22). The time server records the time of the recognition signal. The recorded time is used for correcting the local clocks of the various nodes (2) in the network. A transfer device such as a gateway, a bridge or a router may include a time server and a time packet detector to correct for the transit time of a time packet through such transfer device. The time packet detector (6) is connected at the point of final encoding for transmission or recovery of the clock and data. (see image in original document)
ABSTRACT WORD COUNT: 170

LEGAL STATUS (Type, Pub Date, Kind, Text):

Assignee:	010328	A2	Transfer of rights to new applicant: Hewlett-Packard Company, A Delaware Corporation (3016020) 3000 Hanover Street Palo Alto, CA 94304 US
Application:	960717	A2	Published application (A1with Search Report ;A2without Search Report)
Examination:	020717	A2	Date of dispatch of the first examination report: 20020604
Assignee:	011010	A2	Transfer of rights to new applicant: Agilent Technologies, Inc. (a Delaware corporation) (2885689) 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	010801	A2	Transfer of rights to new applicant: Agilent Technologies Inc. (2929951) a Delaware Corporation 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	010411	A2	Transfer of rights to new applicant: Hewlett-Packard Company, A Delaware Corporation (3016020) 3000 Hanover Street Palo Alto, CA 94304 US Agilent Technologies, Inc. (2885687) 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	010418	A2	Transfer of rights to new applicant: Agilent

Technologies, Inc. (2885687) 395 Page Mill Road Palo Alto, CA 94303 US

Assignee:	010808 A2	Transfer of rights to new applicant: Agilent Technologies Inc. a Delaware Corporation (2929950) 395 Page Mill Road Palo Alto, CA 94303 US
Assignee:	020116 A2	Transfer of rights to new applicant: Agilent Technologies, Inc. (a Delaware corporation) (2885689) 395 Page Mill Road Palo Alto, CA 94303 US Hewlett-Packard Company (a Delaware corporation) (3016021) 3000 Hanover Street Palo Alto, CA 94304 US
Search Report:	971126 A3	Separate publication of the European or International search report
Examination:	980722 A2	Date of filing of request for examination: 980525

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	2283
SPEC A	(English)	EPAB96	4459
Total word count - document A			6742
Total word count - document B			0
Total word count - documents A + B			6742

...INTERNATIONAL PATENT CLASS: **G06F-001/14**

...SPECIFICATION and actions required by the distributed algorithm.
Figures 12A and 12B illustrate the use of **timing packet** detectors to overcome **jitter** and delay in a **network** . Figure 12A illustrates the TPDs as **external** to the transfer device and Figure 12B illustrates the TPDs designed into a transfer device...

15/5,K/11 (Item 11 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00573815
Digital jitter correction method and signal preconditioner.
Verfahren zur Korrektur des digitalen Zitterus und Signalvorbereitungsanordnung.
Procede de correction de la gigne numerique et dispositif de preconditionnement du signal.
PATENT ASSIGNEE:
ADVANCED MICRO DEVICES, INC., (328120), 901 Thompson Place P.O. Box 3453, Sunnyvale, CA 94088, (US), (applicant designated states: BE;DE;DK;ES;FR;GB;GR;IE;IT;LU;NL;PT)
INVENTOR:
Guo, Bin, 4382 Fern Terrace, Fremont, California 94538, (US)
Behrin, Michael N., 431 North 7th Street, No.B, San Jose, California 95112, (US)
LEGAL REPRESENTATIVE:
BROOKES & MARTIN (100141), High Holborn House 52/54 High Holborn, London, WC1V 6SE, (GB)
PATENT (CC, No, Kind, Date): EP 575058 A1 931222 (Basic)
APPLICATION (CC, No, Date): EP 93304077 930526;
PRIORITY (CC, No, Date): US 901360 920619
DESIGNATED STATES: BE; DE; DK; ES; FR; GB; GR; IE; IT; LU; NL; PT
INTERNATIONAL PATENT CLASS: **H04L-007/033** ; **H04L-001/20**
CITED PATENTS (EP A): US 4074358 A; US 4074358 A; GB 2176977 A; EP 11699 A
CITED REFERENCES (EP A):
I.B.M. TECHNICAL DISCLOSURE BULLETIN vol. 32, no. 5B, 1 October 1989, NEW YORK (US) pages 391 - 395 NOMEN NESCIO 'NR/NRZI data modulation-demodulation';

ABSTRACT EP 575058 A1
Apparatus and methods for modifying an incoming binary serial data stream to reduce the Duty Cycle Distortion jitter which involves comparing the time between sequential transition and correcting the jitter by reducing the peak-to-peak distribution of said jitter. (see image in original document)
ABSTRACT WORD COUNT: 45

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application:	931222 A1	Published application (A1with Search Report ;A2without Search Report)
Examination:	940525 A1	Date of filing of request for examination: 940328
Change:	961204 A1	Representative (change)
Examination:	971008 A1	Date of despatch of first examination report: 970821
Refusal:	990721 A1	Date on which the European patent application was refused: 990204

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	931
SPEC A	(English)	EPABF1	6207
Total word count - document A			7138
Total word count - document B			0
Total word count - documents A + B			7138

INTERNATIONAL PATENT CLASS: **H04L-007/033** ...

... **H04L-001/20**

...SPECIFICATION a transmission link, phase noise arises which is exaggerated at the receiver end because of **external** electrical disturbances or changing physical parameters in the **transmission** link or channel. These are called **timing jitter** . To this date, reduction of **jitter** at the receiver end, caused by the **transmission** channel has

not been undertaken.

In the copending above referenced US application 07/901,335...

15/5,K/12 (Item 12 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00571123

Non-intrusive network-based analysis of facsimile transmissions
Beeinflussungsfreie Analyse basierend auf einem Netzwerk von Faksimileubertragungen
Analyse non-intrusive, basee sur un reseau, de transmissions en fac-simile

PATENT ASSIGNEE:
AT&T Corp., (589370), 32 Avenue of the Americas, New York, NY 10013-2412, (US), (Proprietor designated states: all)
INVENTOR:
Fuller, Richard C., 36 Elmwood Lane, Fair Haven, New Jersey 07704, (US)
Goeddel, Thomas W., 31 McCarter Avenue, Fair Haven, New Jersey 07704, (US)
Heick, R.B., 20 Pinckney Road Unit A3, Red Bank, New Jersey 07701, (US)
Herzlinger, Martin, 48 Windham Way, Freehold, New Jersey 07728, (US)
Krishnamurthy, Subramanian, 387 Middlewood Road, Middletown, New Jersey 07748, (US)
LEGAL REPRESENTATIVE:
Watts, Christopher Malcolm Kelway, Dr. et al (37391), Lucent Technologies (UK) Ltd, 5 Mornington Road, Woodford Green Essex, IG8 0TU, (GB)

PATENT (CC, No, Kind, Date): EP 561498 A2 930922 (Basic)
EP 561498 A3 940105
EP 561498 B1 020403
APPLICATION (CC, No, Date): EP 93300999 930211;
PRIORITY (CC, No, Date): US 839972 920221
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: H04M-003/22; **H04L-012/26** ; H04N-001/00
CITED PATENTS (EP A): EP 233697 A; EP 233697 A; US 4076970 A; US 4076970 A; EP 309966 A; EP 474172 A; EP 366160 A; US 4381546 A
CITED PATENTS (EP B): EP 233679 A; EP 309966 A; EP 366160 A; EP 474172 A; US 4076970 A; US 4381546 A
CITED REFERENCES (EP A):
ELECTRONIC DESIGN vol. 31, no. 13, June 1983, HASBROUCK HEIGHTS, NEW JERSEY US pages 123 - 128 D.K. WILKIN 'Protocol Analyzer Speeds Comm. Network Maintenance';
CITED REFERENCES (EP B):
ELECTRONIC DESIGN vol. 31, no. 13 , June 1983 , HASBROUCK HEIGHTS, NEW JERSEY US pages 123 - 128 D.K. WILKIN 'Protocol Analyzer Speeds Comm. Network Maintenance';

ABSTRACT EP 561498 A2

Non-intrusive monitoring and analysis of real-time facsimile transmissions is accomplished. Analog impairment measurements are made on the high speed page signal in those transmissions and protocol analysis is made on the low speed control messages in those transmissions. These measurements and analysis are a powerful tool for trouble shooting service problems afflicting facsimile transmissions. Real customer traffic can be monitored to detect circuit impairments and to evaluate service being provided. A selected incoming trunk of a central office switch is accessed and a monitoring function with respect to that trunk is established. A signal classification operation (66) is performed, which identifies the presence of a facsimile transmission and what kind of facsimile transmission it is. When the classification operation has determined the presence and nature of a facsimile transmission, a series of non-intrusive impairment measurements is made (68) using the page information sent in the course of the facsimile transmission. Analog transmission impairments are identified along with signal to noise performance. Echo and delay measurements are also taken (70) and the protocols are tracked (72). The measurement data are collected (74) and analyzed (76) to ascertain whether or not the facsimile transmission was normal. A diagnostic module (76) uses the measurements to determine why any given transmission was abnormal. (see image in original document)

ABSTRACT WORD COUNT: 216
NOTE:
Figure number on first page: 7

LEGAL STATUS (Type, Pub Date, Kind, Text):

Grant:	020403 B1	Granted patent
Examination:	20000329 A2	Date of dispatch of the first examination report: 20000210
Oppn None:	030326 B1	No opposition filed: 20030106
Application:	930922 A2	Published application (A1with Search Report ;A2without Search Report)
Search Report:	940105 A3	Separate publication of the European or International search report
*Assignee:	940622 A2	Applicant (name, address) (change)
Examination:	940824 A2	Date of filing of request for examination: 940623
*Assignee:	941005 A2	Applicant (transfer of rights) (change): AT&T Corp. (589370) 32 Avenue of the Americas New York, NY 10013-2412 (US) (applicant designated states: DE;FR;GB)

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1235
CLAIMS B	(English)	200214	1186
CLAIMS B	(German)	200214	1056
CLAIMS B	(French)	200214	1438
SPEC A	(English)	EPABF1	17160
SPEC B	(English)	200214	17318
Total word count - document A			18396
Total word count - document B			20998
Total word count - documents A + B			39394

...INTERNATIONAL PATENT CLASS: **H04L-012/26**

...SPECIFICATION said paths and arranged to compensate for channel-impairment effects on the received signal. The **measurement** section is responsive to signals generated in the receiver section during the receipt of random data, to derive a **measurement** of at least one said channel impairment, such as phase or amplitude **jitter** .

Summary of the Invention

Apparatus and a **network** according to the invention are as set out in claims 1, 28 and 29. Preferred...

...claims.

Summary of the Invention

The need identified above is met by an apparatus which **non** - **intrusively** monitors real time facsimile transmissions as they are occurring in a network. The apparatus can...

...It may characterize the amount and kind of facsimile calls being made and it may **measure** certain characteristics of those calls. The apparatus may detect certain characteristics of protocol signals in...

15/5,K/17 (Item 17 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01011214 **Image available**
SYSTEM AND METHOD TO PROVIDE ROUTING CONTROL OF INFORMATION OVER DATA NETWORKS
SYSTEME ET PROCEDE DE COMMANDE D'ACHEMINEMENT D'INFORMATION SUR DES RESEAUX DE DONNEES
Patent Applicant/Assignee:
NETVMG INC, 47529 Fremont Boulevard, Fremont, CA 94538, US, US (Residence), US (Nationality)
Inventor(s):
KLINKER Eric, 201 Fourth Street, #511, Oakland, CA 94607, US,
JOHNSON Jeremy, 3913 Cerrito Avenue, Oakland, CA 94611, US,
Legal Representative:
BACKUS Kenneth (et al) (agent), 2225 E. Bayshore Road, Suite 200, Palo Alto, CA 94303, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200341342 A1 20030515 (WO 0341342)
Application: WO 2002US35158 20021101 (PCT/WO US0235158)
Priority Application: US 2001350186 20011102; US 200113809 20011207
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **H04L-012/28**
International Patent Class: H04J-003/14; G01R-031/08; **G06F-015/16**
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 18133

English Abstract
A system and a method for controlling routing of data over multiple networks. Accordingly, network users can define specific flow polices (90) to ensure that a particular flow of data traffic (95) maintains an acceptable level of performance, such as in terms of latency, loss, jitter, or an acceptable level usage that includes cost and bandwidth management across multiple networks.
French Abstract
L'invention concerne un systeme et un procede de commande d'acheminement de donnees sur des reseaux multiples. Il s'ensuit que des utilisateurs de reseau peuvent definir des polices specifiques de flux (90) afin de faire en sorte qu'un flux particulier de trafic de donnees (95) soit maintenu a un niveau acceptable de performances, notamment en termes de retard, de perte, d'instabilite, ou a un niveau acceptable d'utilisation incluant une gestion de cout et de largeur de bande a travers des reseaux multiples.

Legal Status (Type, Date, Text)
Publication 20030515 A1 With international search report.

Main International Patent Class: **H04L-012/28**
...International Patent Class: **G06F-015/16**
Fulltext Availability:
Detailed Description

Detailed Description
... process of stateful monitoring of firewalls. Correlator 252 determ ines the current service level by **measuring** several traffic characteristics during a **TCP** transaction. For example, correlator 252

32
determines the round trip time ("RTT") incurred on a **network** , and hence, this serves as a **measure** of **latency** for the **network** traffic.

[0083] Figure 7 shows how coffelator 652 of **passive** flow analyzer 630 of Figure 6, placed near a source (e.g., client having a source address), can determine the **network** **latency** ("NL") and server response time ("SRT') for a **TCP** traffic stream. Figure 8 shows how correlator 652 of **passive** flow analyzer 630 of Figure 6, placed near a destination (e.g., server having a destination address), can determine the **network** **latency** ("NU) and server response time ("SRT") for a **TCP** traffic stream

[0084] Correlator 652 of Figure 6 determines NL, for example, by **estimating** the difference 791 of Figure 7 in time between a **TCP** SYN packet and its corresponding TCP SYN ACK packet. The difference in time between SYN and SYN ACK 791 is a rough **estimation** of the RTT excluding the small amount of time 790 that the server takes to...the previous value for the RTT has not changed beyond an operable range since the **TCP** handshake occurred. The **measurement** shown bv 794 indicates that **measured** congestion increases in the path as SRT 792 correspondingly increases. For
33
purposes of this example, it is assumed that the data segments in the initial **HTTP** GET are sent back to back. In Figure 7, the **passive** flow analyzer 630 is deployed close to (i.e., minimal or negligible **latency** due to geographically different locations) the clients requesting content from the IP data **network** , such as the Intemet.

[0087] Correlator 652 also determines SRT 892 of Figure 8, for example, by **estimating** the delta time between the HTTP GET message 993 and the first data segment 894...

15/5,K/22 (Item 22 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00950756 **Image available**

SYSTEM AND METHOD TO ASSURE NETWORK SERVICE LEVELS WITH INTELLIGENT ROUTING
SYSTEME ET PROCEDE POUR ASSURER DES NIVEAUX DE SERVICES DE RESEAU AVEC ROUTAGE INTELLIGENT

Patent Applicant/Assignee:
NETVMG INC, 1020 Rincon Circle, San Jose, CA 95131, US, US (Residence), US (Nationality)
Inventor(s):
KLINKER Eric, 480 South 21st Street, San Jose, CA 95115, US,
JOHNSON Jeremy, 3913 Cerrito Avenue, Oakland, CA 94611, US,
SEQUIERA Allwyn, 21225 Saratoga Hills Road, Saratoga, CA 95070, US,
Legal Representative:
BACKUS Kenneth R Jr (et al) (agent), Carr & Ferrell LLP, 2225 East Bayshore Road, Suite 200, Palo Alto, CA 94303, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200284951 A1 20021024 (WO 0284951)
Application: WO 2002US11357 20020410 (PCT/WO US0211357)
Priority Application: US 2001833219 20010410
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **H04L-012/28**
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 19372

English Abstract
A method and system for maintaining a traffic service level for data communicated by a computer network having a source (USER1). The computer network is connected to at least one of many networks (82), where each of the many networks includes a number of paths (86) for transporting the data communicated to a destination (USER2, USER3). In one embodiment to the method, the traffic service level associated with one of the paths (86) between the source (USER1) and destination (USER2, USER3) is monitored. Then, it is determined whether the traffic service level associated with that path (86) meets one or more performance metrics. If a flow of data communicated over the monitored path (86) fails to meet at least one of the performance metrics, then a service level violation is indicated. Upon such an indication, an alternate path is selected to resolve the service level violation.

French Abstract
Cette invention se rapporte a un procede et a un systeme servant a maintenir un niveau de services de trafic pour les donnees transmises par un reseau informatique ayant une source (UTILISATEUR1). Le reseau informatique est connecte a au moins un reseau parmi un grand nombre de reseaux (82), chacun de ces reseaux comprenant un certain nombre de voies (86) destinees a transporter les donnees transmises a une destination (UTILISATEUR2, UTILISATEUR3). Dans un mode de realisation de ce procede, le niveau de service de trafic associe a l'une des voies (86) entre la source (UTILISATEUR1) et la destination (UTILISATEUR2, UTILISATEUR3) est surveille. On determine ensuite si le niveau de service de trafic associe a cette voie (86) satisfait a une ou plusieurs mesures de performances. Si un flux de donnees transmises via la voie surveillee (86) ne satisfait pas a au moins l'une des mesure de performances, alors une violation de niveau de service est indiquee. Lors d'une telle indication, une autre

voie est selectionnee p[redacted] resoudre la violation de nive[redacted] de service.

Legal Status (Type, Date, Text)
Publication 20021024 A1 With international search report.
Publication 20021024 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20030313 Request for preliminary examination prior to end of 19th month from priority date

Main International Patent Class: **H04L-012/28**
Fulltext Availability:
Detailed Description

Detailed Description
... manner that 30% packet loss would.

Correlator 252 operates to interpret the elements (e.g., **TCP** and IP) from the packets to determine the current service level of the flow and then groups the **packets** into a specific traffic flow. The current service level as determined by correlator 252 is performed by **measuring** several traffic characteristics during a **TCP** transaction. For example, correlator 252 determines the round trip time ("RTT") incurred on a **network** , and hence, this serves as a **measure** of **latency** for the **network** traffic. Figure 7 shows how a correlator of **passive** flow analyzer 155 of Figure 6, placed near a source (i.e., client's source address), can determine the **network** **latency** ("NL") and server response time ("SRT") for a **TCP** traffic stream.

15/5,K/32 (Item 32 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00855100 **Image available**

IP PACKET IDENTIFICATION METHOD AND SYSTEM FOR TCP CONNECTION AND UDP STREAM

PROCEDE D'IDENTIFICATION DE PAQUETS DE DONNEES IP ET SYSTEME PERMETTANT LA CONNEXION TCP ET FLOT DE DONNEES UDP

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Priority Application: US 2000205280 20000518; US 2001264354 20010126
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **G06F-017/30**
International Patent Class: H04J-003/06; H04J-003/14
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 6484

English Abstract
A method of measuring jitter of a packet flow includes identifying the data packet flow at each of a first (102) and second (106) network locations by analyzing the data fields of each of the packets in the flow. The method associates a transmit time code with each packet transmitted from the first location (112), and associates the receive time code with each packet received at the second location (110). The method calculates inter-arrival times for consecutive pairs of packets by (i) subtracting the transmit time code of the first packet from the transmit time code of the second packet, (ii) subtracting the receive time code associated with the first packet from the receive time code associated with the second packet, and (iii) subtracting the results. The method includes calculating a jitter value as a smoothed version of two or more inter-arrival times, smoothed over a predetermined number of pairs of consecutive packets.

French Abstract
L'invention concerne un procede d'evaluation de la gigue d'un flot de paquets de donnees, consistant a identifier le flot de paquets de donnees a chacun des premier (102) et second (106) emplacements reseau en analysant les champs de donnees de chacun des paquets contenus dans le flot. Le procede consiste a associer un code de duree d'emission a chaque paquet transmis par le premier emplacement (112), puis a associer le code de duree de reception a chaque paquet recu au second emplacement (110). Le procede consiste a calculer des temps entre les arrivees pour les paires de paquets consecutives (i) par soustraction du code de duree de d'emission du premier paquet au code de duree de reception du second

paquet, (ii) par soustraction du code de duree de reception associe au premier paquet au code de duree de reception associe au second paquet, et (iii) par soustraction des resultats. Le procede consiste egalement a calculer une valeur de gigue comme version ajustee d'au moins deux temps entre les arrivees, ajustes sur un nombre predetermine de paires de paquets consecutifs.

Legal Status (Type, Date, Text)
Publication 20011122 A1 With international search report.
Examination 20020502 Request for preliminary examination prior to end of 19th month from priority date

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description

Detailed Description
... related to the following U.S. applications, of common assignee.

[0005] "Non-Deterministic Software Delay **Estimation** Method And System For Packet Based Data Network Systems," U.S. Patent Application Serial No ...

...to measuring the packet jitter characteristics of packetized data networks.

[0011] The invention measures the **jitter** (also referred to herein as "packet **jitter** ") of TCP connections or UDP streams without altering the behavior of the network. This type of **non - intrusive** measurement is also referred to herein as a " **passive** measurement." [0012] Packet **jitter** is an important characteristic of real-time traffic flows such as VoIP or streaming media (e.g., video). High **jitter** can often lead to poor quality of the media stream. **Jitter** is the overwhelming cause of poor quality in VoIP applications.

15/5,K/36 (Item 36 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00546902 **Image available**
BI-DIRECTIONAL COMMUNICATIONS PROTOCOL
PROTOCOLE POUR COMMUNICATIONS BIDIRECTIONNELLES
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Patent and Priority Information (Country, Number, Date):
Patent: WO 200010275 A1 20000224 (WO 0010275)
Application: WO 99US18324 19990812 (PCT/WO US9918324)
Priority Application: US 98135502 19980817
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: H04J-003/06
International Patent Class: **H04L-007/00**
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 5600

English Abstract
In a communications system wherein a sequence of data packets is produced by a packet source (29) and are transmitted as a data stream with a variable jitter, a method for synchronizing a receiving device relative to the sequence of data packets includes providing first and second data packets in the sequence at respective first and second input times. The first data packet is transmitted, and a measure of the jitter associated with the transmission of the first data packet is determined and written into the second data packet. After the second data packet is transmitted, the receiving device, having received the first and second data packets, uses the measure of the jitter in the second data packet to synchronize to the first input time.

French Abstract
La presente invention concerne un systeme de communications dans lequel une sequence de paquets de donnees est produite par une source de paquets (29) et ou les paquets de donnees sont emis sous forme d'un train de donnees dont l'instabilite est variable. L'invention concerne plus particulierement un procede de synchronisation entre un dispositif recepteur et une sequence de paquets de donnees. Ce procede consiste a placer dans la sequence le premier paquet de donnees a un premier instant d'entree puis le second paquet de donnees a un second instant d'entree. On realise l'envoi du premier paquet de donnees puis on mesure l'instabilite caracterisant l'envoi du premier paquet de donnees, mesure que l'on ecrit dans le second paquet de donnees. Apres envoi du second paquet de donnees, le dispositif recepteur, une fois qu'il a recu le premier et le second paquet de donnees, utilise la mesure d'instabilite inscrite dans le second paquet de donnees pour se caler sur le premier instant d'entree.

International Patent Class: **H04L-007/00**
Fulltext Availability:
Claims

Claim
... first and
M
4.
second input times;
transmitting the first data packet and determining a **measure** of the jitter
associated with the transmission of the first data packet;
writina the measure...

...and second data packets and uses the measure of the jitter in the second data **packet** to synchronize to the first input time.

2 A method according to claim 1, wherein providing the first and second data **packets** comprises providing NTEG data, and wherein writing the measure of the **jitter** comprises writing the measure in an NTEG data field.
or
A method accordin'D to claim 1, wherein determinincr the measure of the **jitter** comprises **passively** sampling the data stream.

4 A method according to claim 3, wherein determining the measure of the **jitter** comprises filtering the sampled data stream to determine a delay at which the first data
0
packet appears in the sampled data stream.

5 A method according to claim 3, wherein providing the first and second **packets** comprises inputting the **packets** to a multiplexer, and wherein **passively** sampling the data stream comprises sampling an output of the multiplexer.

6 A method according to claim 1, wherein writing the **measure** of the **jitter** comprises writing a modulo of the determined **measure** .

7 A method according to claim 1, wherein transmitting the first and second data **packets** comprises transmitting **packets** via a satellite link.

8 A method according to claim 1, and comprising:
Z@
receiving...

...receipt of
11
SUBSTITUTE SHEET (RULE 26)
PCT[US99/18324 the first packet;
reading the **measure** of the 'itter of the first data packet written into the second
J
data packet...